

### **Amendments to the Claims:**

This listing of claims replaces all prior versions and listings of claims in the application:

### **Listing of Claims:**

1. **(Currently Amended)** A method for scanning a message-list accessible to a plurality of processors, said method comprising:  
  
    identifying, in said message-list, a message-slot containing a message intended for a recipient processor from said plurality of processors;  
  
    obtaining, from said identified message-slot, information indicative of a location of a succeeding message-slot in said message-list; and  
  
    caching, for retrieval during a subsequent scan of said message-list, said information indicative of said location of said succeeding message-slot by determining if a reset condition exists and caching said information if no reset condition exists;  
  
    wherein determining if a reset condition exists comprises determining whether a number of scans since a previous occurrence of a reset condition exceeds a threshold.
2. **(Original)** The method of claim 1, wherein obtaining information indicative of said location of said succeeding message-slot comprises obtaining a next-message pointer from said identified message-slot.
3. **(Original)** The method of claim 1, wherein caching said information indicative of said location of said succeeding message-slot comprises storing said information in a memory local to said recipient processor.
- 4-6. **(Cancelled)**

7. **(Currently Amended)** A method for scanning a message-list accessible to a plurality of processors, said method comprising:

retrieving, from a cache associated with a scanning processor from said plurality of processors, information identifying a starting message-slot; and

beginning a scan of said message-list at said starting message-slot by determining whether a reset condition exists and beginning said scan at said starting message-slot if no reset condition exists;[[·]]

wherein determining whether a reset condition exists comprises determining whether a number of scans since a previous occurrence of a reset condition exceeds a threshold.

8. The method of claim 7, wherein retrieving information identifying a starting message-slot comprises retrieving a pointer to a message subsequent to a previous message intended for said scanning processor.

9-11. **(Cancelled)**

12. **(Currently Amended)** A data-storage system comprising:

a plurality of processors, each processor having a local memory, the local memory including reset-detecting process configured to detect a reset condition;

a shared memory accessible to each processor in said plurality of processors;

a message section in said shared memory, said message section including a message-list having an ordered sequence of message-slots, each of said message-slots including information identifying a succeeding slot in said message-list; [[·]]

wherein said reset-detecting process is configured to compare a reset threshold with an interval since a scanning processor encountered a message-slot containing a message for which said scanning processor was an intended recipient.

13. **(Original)** The data-storage system of claim 12, wherein said local memory comprises a cache for storage of said information identifying a succeeding slot.
14. **(Original)** The data-storage system of claim 13, wherein said cache comprises a look-ahead pointer identifying said succeeding message-slot.
15. **(Original)** The data-storage system of claim 14, wherein said local memory comprises a counter indicating an interval since a scanning processor encountered a message-slot containing a message for which said scanning processor was an intended recipient.
16. **(Original)** The data-storage system of claim 15, wherein said counter indicates a number of scans since a scanning processor encountered a message-slot containing a message for which said scanning processor was an intended recipient.
- 17-18. **(Cancelled)**
19. **(Currently Amended)** The data-storage system of claim ~~[[18]]~~ 12, wherein said reset-detecting process is configured to declare a reset condition when said interval exceeds said reset threshold.
20. **(Currently Amended)** The data-storage system of claim ~~[[18]]~~ 12, wherein said reset-detecting process is configured to detect whether said information identifying a succeeding slot in said message-slot is invalid.
21. **(Original)** The data-storage system of claim 20, wherein said reset-detecting process is configured to declare a reset condition when said information identifying a succeeding slot in said message-list is invalid.
22. **(Currently Amended)** A computer-readable medium having encoded thereon software for scanning a message-list accessible to a plurality of processors, said software comprising instructions for:

identifying, in said message-list, a message-slot containing a message intended for a recipient processor from said plurality of processors;

obtaining, from said identified message-slot, information indicative of a location of a succeeding message-slot in said message-list; and

caching, for retrieval during a subsequent scan of said message-list, said information indicative of said location of said succeeding message-slot by determining if a reset condition exists and caching said information if no reset condition exists; [[-]]

wherein said instructions for determining whether a reset condition exists comprise instructions for determining whether a number of scans since a previous occurrence of a reset condition exceeds a threshold.

23. **(Original)** The computer-readable medium of claim 22, wherein said instructions for obtaining information indicative of said location of said succeeding message-slot comprise instructions for obtaining a next-message pointer from said identified message-slot.

24. **(Original)** The computer-readable medium of claim 22, wherein said instructions for caching said information indicative of said location of said succeeding message-slot comprise instructions for storing said information in a memory local to said recipient processor.

25-27. **(Cancelled)**

28. **(Currently Amended)** A computer-readable medium having encoded thereon software for scanning a message-list accessible to a plurality of processors, said software comprising instructions for:

retrieving, from a cache associated with a scanning processor from said plurality of processors, information identifying a starting message-slot; and

beginning a scan of said message-list at said starting message-slot by determining whether a reset condition exists and beginning said scan at said starting message-slot if no reset condition exists;[[·]]

wherein said instructions for determining whether a reset condition exists comprise instructions for determining whether a number of scans since a previous occurrence of a reset condition exceeds a threshold.

- 29. (Original)** The computer-readable medium of claim **28**, wherein said instructions for retrieving information identifying a starting message-slot comprise instructions for retrieving a pointer to a message subsequent to a previous message intended for said scanning processor.

**30-32. (Cancelled)**